Appendix A

IN THE

UNITED STATES COURT OF APPEALS

FOR THE SEVENTH CIRCUIT

No. 13735 SEPTEMBER TERM, 1962—SEPTEMBER SESSION, 1962

MINNESOTA MINING AND MANUFACTURING COMPANY, a corporation of Delaware,
Plaintiff-Appellee,

v.

TECHNICAL TAPE CORP., a corporation of New York; TECHNICAL TAPE OF ILLINOIS, INC., a corporation of Illinois; and LEVIN BROTHERS PAPER COMPANY, a corporation of Illinois,
Defendants-Appellants.

Appeal from the United States District Court for the Northern District of Illinois, Eastern Division.

OCTOBER 17, 1962.

Before SCHNACKENBERG, CASTLE and SWYGERT, *Circuit Judges.*

CASTLE, *Circuit Judge.* Minnesota Mining and Manufacturing Company, plaintiff-appellee, owner of Oace et al. Reissue Patent No. 23,843, covering an insulating tape,

brought suit in the District Court charging the defendants-appellants with infringement of the patent. The defendants-appellants are Technical Tape Corporation, manufacturer of the accused tapes; Technical Tape of Illinois, Inc., a dealer in and distributor of the accused tapes; and Levin Brothers Paper Company, a purchaser and reseller of some of the accused tapes.

Reissue Patent No. 23,843 is a combination patent relating to a stretchable and retractable, pressure-sensitive adhesive vinyl plastic insulating tape. Each of the accused products is such a tape.

The defendants denied infringement and asserted invalidity of the patent. The District Court held the patent to be valid and that Claims 1, 3, 4, 6, 7, 8 and 9 had been infringed. The defendants appealed and contend, in substance, (1) that the accused tapes do not fall within the scope of the patent claims and that the District Court by its holding of infringement erroneously ignored the limitations of the claims; (2) that on the issue of validity the court misinterpreted the prior art relied upon and erred in its finding and conclusion that each of the claims particularly points out and distinctly claims the invention; and (3) that the court erred in denying the defendants' post-trial motion to suspend entry of judgment so that defendants could take depositions to establish an "unclean hands" defense based on alleged anti-trust law violations constituting abuse of patent rights.

The reissue patent here involved has been the subject of other litigation.[1] Typical claims 1 and 6 are set out in full

[1] See, for instance: *Minnesota Mining & Mfg. Co.* v. *Superior Insulating Tape Co.*, 8 Cir., 284 F. 2d 478; *Minnesota Mining & Mfg.*

in *Sears, Roebuck & Co.* v. *Minnesota Mining & Mfg. Co.*, 4 Cir., 243 F. 2d 136, footnote at pages 137-138, and will not be repeated here.

The novelty and value claimed for plaintiff's invention is that it permits of the use of polyvinyl chloride, which is normally too stiff and inflexible, in the production of a highly stretchable and retractable insulating tape, especially effective and useful in the splicing of electrical wires and cables and for the insulation and protection of electrical conductors, and at the same time eliminates the deterioration of the pressure-sensitive adhesive applied to the vinyl chloride backing, an effect normally caused by the plasticizers used as the agents to soften the backing. The problem in making a flexible tape with a polyvinyl backing and a pressure-sensitive adhesive had been that when enough plasticizer was added to the polyvinyl chloride to make it sufficiently flexible the plasticizer had a deteriorating effect on the adhesive causing it to soften and become "pasty" or to lose tackiness and become non-adherent. The patent states that it obtains the unique and valuable result of a plasticized vinyl backing which is in permanent equilibrium with the adhesive. The patent defines this "permanent equilibrium" to mean:

> ". . . [T]hat the pressure-sensitive adhesive layer neither softens (becomes 'pasty') nor loses tackiness (becomes non-adherent) on prolonged contact with the backing or film layer. The adhesive remains aggressively tacky, and also remains 'eucohesive' (by which

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Co. v. *United States Rubber Co.*, 4 Cir., 279 F. 2d 409; *Sears, Roebuck & Co.* v. *Minnesota Mining & Mfg. Co.*, 4 Cir., 249 F. 2d 66; *Sears, Roebuck & Co.* v. *Minnesota Mining & Mfg. Co.*, 4 Cir., 243 F. 2d 136, and district court cases referred to in the cases cited.

it is meant that it is more cohesive than adhesive such that offsetting or transfer of adhesive material does not result when the tape is unwound from rolls or removed from surfaces to which temporarily applied and can be handled without transfer of adhesive material to the fingers)."

The claims when read in the light of the specifications teach that in order to obtain the novel and valuable features of the invention it is necessary to use a combination of plasticizer of low molecular weight and plasticizer of high molecular weight. The low molecular weight plasticizers are identifiable with plasticizers described in some of the examples given in the specifications, and plasticizers referred to in some of the claims, as being of the "liquid" type. The high molecular weight plasticizers are identifiable with those described or referred to as the "resinous", "non-migratory" or "permanent" type. The claims state the proportion of plasticizer materials to polyvinyl material, and to each other, as approximations but within defined limits.[2] And, the specifications point out:

"It will be understood that, where specific ratios of specific polymers, low molecular weight plasticizers,

[2] The proportions recited in typical claim 1 are "a stable blend of a film-forming polymer of monomers including at least a major proportion of vinyl chloride, a substantially non-volatile liquid phthalyl ester plasticizer amounting to 8 to 20 parts per 100 parts of said polymer, and a soft and viscous low-acid-number alkyd plasticizer resin in amount at least equal to the amount of said phthalyl ester plasticizer, the total amount of said plasticizers being about ⅓ to ½ the amount of said polymer". The proportions recited in typical claim 9 are: "a stable blend of (a) a film-forming polymer of monomers including at least a major proportion of vinyl chloride, and (b) a substantially non-volatile plasticizing material therefor in an amount within the range of at least about ⅓ the weight of said polymer but not in excess of about ½ the weight of said polymer and comprising at least a major proportion of a non-migrating viscous plasticizer resin".

and high molecular weight plasticizers are described in the examples, substitution of equivalent but somewhat different materials may require alteration of these ratios in order to obtain equivalent results, all in conformity with well-recognized principles."

The materials which are described as constituting the novel and useful combination were all well known but the invention is claimed to lie in the peculiar combination of plasticizers of low molecular weight and of high molecular weight to achieve the results stated.

The cause was heard on the pleadings, stipulations, answers to interrogatories, depositions, exhibits, and the testimony of witnesses for the parties, including expert testimony. Consequently, insofar as the sixty-one detailed findings of the District Court concern factual issues such as the use made of prior art, the nature of the improvement made over prior art, and the characteristics, qualities and types of plasticizer ingredients used in the manufacture of defendants' tapes, Rule 52(a) of the Federal Rules of Civil Procedure (28 U. S. C. A.) applies. The scope of our review of such findings is limited to a determination of whether or not they are "clearly erroneous". *Armour & Co.* v. *Wilson & Co.*, 7 Cir., 274 F. 2d 143, 156. If they find support in the evidence we are bound thereby.

The District Court found, among other things, that it was not for want of materials, nor for want of a market, that the appearance of the tape product of the patent in suit was delayed, and that earlier attempts by others to produce such a vinyl backed tape had failed. The record amply supports those findings.

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In their brief in this Court the defendants rely upon two prior art patents, Schmidt patent No. 2,332,265 and Nollau patent No. 2,118,101. The District Court did not err in concluding that these patents did not anticipate plaintiff's invention.

The Nollau patent is directed to a cloth surgical tape waterproofed with plasticized cellulose nitrate. An adhesive is applied to the waterproofed woven cloth fabric backing. The patent teaches the use of a rubber adhesive-innocuous plasticizer to avoid deleterious action of the plasticized cellulose nitrate composition on the pressure-sensitive adhesive which would cause the adhesive to become excessively sticky and destroy the properties necessary for a satisfactory adhesive. But Nollau does not mention nor disclose, much less teach the solution of, the problem of imparting high stretchability and retractibility to a polyvinyl chloride backing and at the same time maintaining it in permanent equilibrium with the adhesive. Nor is Nollau concerned with electrical insulation properties.

The Schmidt patent was a file wrapper reference. It relates to a pressure-sensitive adhesive sheet or tape consisting of a plasticized polyvinyl chloride backing and an adhesive containing polyisobutylene. It recognizes the difficulty of using plasticized polyvinyl chloride backing with pressure-sensitive adhesives but does not teach a solution which would make it possible to obtain a highly stretchable and retractable tape. The District Court's findings that the Schmidt tape was relatively non-stretchy, and that there is no evidence that it was ever commercially sold or marketed for any purpose, find support in the record. Schmidt

neither attained the results of the Oace et al. patent nor taught how to attain them. Schmidt actually serves to illustrate the improvement over prior art achieved by the patent in suit.

We find no merit in defendants' contention that the Oace et al. patent fails to meet the requirements of distinctness and particularity prescribed by 35 U. S. C. A. § 112. Defendants' argument in this connection is directed primarily to the reissue claims (Claims 6 to 9 inclusive). But the invention claimed is identical and the reissue merely clarifies, without changing the invention or the scope of the original claims. The essential difference between the original and the reissue claims is that the latter make clearer and more obvious the use of a synthesized plasticizer to obtain the same results in the same manner and as the result of the combination of low molecular weight ingredients with high molecular weight ingredients. What would infringe claims 1, 3 and 4 by application of the doctrine of equivalents, responds more literally to claims 6, 7, 8 and 9. And, with respect to both the original and reissue claims, it is proper to refer to the descriptive portions of the specifications to ascertain the intent and meaning of the language employed. *Bates* v. *Coe*, 98 U. S. 31, 38. Claims are to be construed in the light of the specifications. *Sherbatskoy* v. *United States Steel Corp.*, 7 Cir., 287 F. 2d 552, 556.

On the issue of infringement the record establishes that in the accused tapes the polyvinyl chloride was plasticized with either (1) a combination of Flexol R-2H, Paraplex G-60 and Dioctyl phthalate; (2) a combination of Flexol R-2H and Paraplex G-60; (3) Paraplex G-50; (4) Flexol

R-2H; (5) Admex 761.[3] In the specific and detailed findings made as to each of the five accused tapes the District Court found, in substance, that the plasticizers were used in such proportion to the vinyl chloride, and to each other where more than one of the plasticizers were used, as to fall within the teachings disclosed by the claims and specifications of the plaintiff's patent to be necessary to achieve the balance between low molecular weight plasticizer and high molecular weight plasticizer required to establish permanent equilibrium between the resulting plasticized vinyl backing and the pressure-sensitive adhesive; that Paraplex G-50, Flexol R-2H and Admex 761 could each be used as the single plasticizer ingredient because each was a synthesis containing a requisite proportion of low molecular weight plasticizer material to high molecular weight material; and that the accused tapes are so identical in appearance, utility and physical characteristics as to be indistinguishable by a purchaser from plaintiff's tapes, and were sold in gauges designated "330" and "220" corresponding to plaintiff's products numbered "33" and "22".

It would serve no purpose to attempt to discuss the highly technical evidence in detail. Suffice it to point out that in an accompanying opinion[4] filed with his findings of fact and conclusions of law the learned trial judge observed that the record is replete with the testimony of experts as to the constituent elements of the various plasticizers used in the manufacture of the accused tapes, that inconsistencies

[3] With the exception of dioctyl phthalate these are trade names of plasticizer materials.

[4] 200 F. Supp. 753, 761.

and disputes occur, but that the testimony of plaintiff's credible and eminently qualified expert, Dr. Frederic T. Wall, concerning the actual analysis made of the accused tapes must be accorded greater weight than the somewhat vague testimony of the witnesses connected with the firms manufacturing the plasticizers used in defendants' tapes. It was the function of the District Court judge, as the trier of the facts, to judge of the credibility of the witnesses and his determination of factual issues based on the resolution he made of conflicting testimony is not to be disturbed here unless clearly erroneous. From our examination of the record we find that there is substantial evidence to support the District Court's conclusion that the charges of infringement are sustained. We are not left with any definite or firm conviction that a mistake has been made. Cf. *United States* v. *United States Gypsum Co.*, 333 U. S. 364, 394-395.

The substance of defendants' argument is that the proportions of some of the plasticizer materials, or of the ingredients of such materials, used in the accused tapes vary from ratios expressed in the claims and thus afford defendants full exoneration from infringement. Defendants would rigidly limit the teachings of the patent to the proportions expressed as numerical ratios although it is clear from the claims and specifications that these are stated as approximations and as within limitations of greater range. In this connection the Supreme Court has had occasion to observe (*Graver Tank & Mfg. Co., Inc.* v. *Linde Air Products Co.*, 339 U. S. 605, 607 and 609-610) that it is customary for infringers to vary somewhat from the exact disclosure of a valuable patent, because "[o]utright and forthright dupli-

cation is a dull and very rare type of infringement" and that:

> "Consideration must be given to the purpose for which an ingredient is used in a patent, the qualities it has when combined with the other ingredients, and the function which it is intended to perform.
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> * * * * *
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> A finding of equivalence is a determination of fact. * * * Like any other issue of fact, final determination requires a balancing of credibility, persuasiveness and weight of evidence. It is to be decided by the trial court and that court's decision, under general principles of appellate review, should not be disturbed unless clearly erroneous. Particularly is this so in a field where so much depends upon familiarity with specific scientific problems and principles not usually contained in the general storehouse of knowledge and experience."

The defendants' post trial motion to suspend entry of judgment does not appear in the appendix nor does defendants' brief give any record reference thereto. We will not search the record to locate and appraise the content of the motion. *Whitson* v. *Aurora Iron & Metal Co.*, 7 Cir., 297 F. 2d 106, 111. But from what we glean from statements made in the briefs concerning the motion, and from the references made in the District Court's order denying the same, we conclude that the Court did not err in its denial. It appears that the delay was sought to enable defendants to take depositions for the purpose of establishing an "unclean hands" defense based on alleged anti-trust law violations constituting abuse of patent rights. The motion was premised on the return of an indictment against the

plaintiff. The record discloses that the defendants had knowledge of the grand jury investigation in which the indictment was returned for some eighteen months prior to the trial of this case. In a pre-trial memorandum they had charged the plaintiff with waging a "war to establish a monopoly over all vinyl plastic tape" and stated that plaintiff's activities were under scrutiny in a "current Federal Grand Jury investigation". Defendants had ample opportunity to secure all necessary discovery to ascertain if a basis existed for raising the issue they belatedly sought to explore some two and one-half years later after a full trial and a decision on the merits. And the indictment returned shortly thereafter is but an accusation—it constitutes no newly discovered evidence of "unclean hands". The situation here is not comparable to that presented in *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U. S. 238 and other cases relied upon by defendants but is more akin to that which was found in *Leeds & Northrup Co.* v. *Doble Engineering Co.*, 1 Cir., 160 F. 2d 750, 751-752, to justify denial of a similar request.

We have considered the basic contested issues presented by defendants' appeal but we have not deemed it necessary to comment on all of the arguments advanced by the defendants in support of their position nor to expand this opinion by analysis of the cases cited in connection with the defendants' contentions. We have, however, in arriving at the disposition we make of the case, considered each of the arguments advanced and the authorities relied upon in support thereof.

We conclude that the District Court did not err in denying the post-trial motion, that its findings of fact on the

issues of validity and infringement have substantial support in the record, and that its conclusions of law with respect to those issues are applications of correct legal criteria.

The judgment order of the District Court is affirmed.

AFFIRMED.

A true Copy:

Teste:

Clerk of the United States Court of Appeals for the Seventh Circuit.

Appendix B

IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF ILLINOIS

EASTERN DIVISION

MINNESOTA MINING & MANUFACTURING COMPANY, a corporation of Delaware, *Plaintiff*, *v.* TECHNICAL TAPE CORP., a corporation of New York; TECHNICAL TAPE OF ILLINOIS, INC., a corporation of Illinois; FLOYD R. WARNER, and LEVIN BROTHERS PAPER COMPANY, a corporation of Illinois, *Defendants*.	No. 54 C 1116

DECISION ON MERITS

Plaintiff charges defendants with infringement of its Reissue Patent No. 23,843 pertaining to insulating tape. The chronology[1] of the patents and pleadings and the history of related litigation[2] are outlined below.

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[1] February, 1945. First sale of patented tapes. January 12, 1946. Application for original Patent No. 2,559,990. July 10, 1951. Patent No. 2,559,990 issued to plaintiff, assignee. July 9, 1952. Application for reissue. June 29, 1954. Reissue granted. August 4, 1954. Instant complaint filed. September 30, 1954. Answers of defendants. April 15, 1955. Amended answer of defendants.

[2] *Minnesota Mining and Manufacturing Company* v. *Superior Insulating Tape Company*, 284 F. 2d 478 (8th Cir. 1960); *Minnesota Mining and Manufacturing Company* v. *United States Rubber Company*, 279 F. 2d 409 (4th Cir. 1960); *Sears, Roebuck and Company* v. *Minnesota Mining and Manufacturing Company*, 249 F. 2d 66 (4th Cir. 1957); *Sears, Roebuck and Company* v. *Minnesota Mining and Manufacturing Company*, 243 F. 2d 136 (4th Cir. 1957) (185 F. Supp. 716); *Minnesota Mining and Manufacturing Company* v.

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The patent concerns a single strip[3] of stable, pressure-sensitive, highly stretchable and retractable insulating tape used by electricians. It is in roll form and when unwound does not delaminate.[4] The film backing[5] has the advantage of being stretchable by simple hand pulling[6] from 50 to 100% at room temperature, and then being retractable. This feature makes it invaluable in covering cable splices because it can be wrapped on easily and snugly in one operation. It is also safely and readily usable by workmen making splices while working on high poles. The rolls of tape do not deteriorate because the plasticizers in the vinyl backing do not migrate to the adhesive[7] which, if they did, would cause it to become soft, pasty or lose tack. Patentees assert that they achieve this singular end by using in the vinyl backing of the tape a combination[8] of plasticizers of both high and low molecular weights (a heterogeneity of molecular weights both over and below 1,000).[9] The tape conforms to irregular surfaces. The backing is water and hydrocarbon-oil insoluble. This is highly usable in industry and mining because it is impervious to elements and rough surfaces causing deterioration or corrosion. It has high dielectric strength.

The issues are the validity and infringement of claims 1, 3, 4, 6, 7, 8 and 9.

United States Rubber Company, 178 F. Supp. 385 (D. C. N. C. 1959); *Minnesota Mining and Manufacturing Company* v. *Plymouth Rubber Company*, 178 F. Supp. 591 (D. C. Ill. 1959) (instant cause); *Minnesota Mining and Manufacturing Company* v. *Sears, Roebuck and Company*, 141 F. Supp. 686 (D. C. N. C. 1956); *Minnesota Mining & Manufacturing Company* v. *Technical Tape*, 123 USPQ 96 (1959) (N. Y. Supr. Ct.).

[3] 4 to 10, 12 or 20 mils. The patent specifications state 5-10 mils generally most useful.

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The plaintiff is the owner of the patents and the defendants are the manufacturer, distributors and users of the alleged infringing tapes.

The novelty and virtues of the reissue patent are stated in example 5 thereof.[10]

The permanent equilibrium between backing and adhesive is said by the patent to be secured by employing with the vinyl chloride polymer a combination of modifiers including a substantial but minor amount (not to exceed 20 parts per 100 parts of the vinyl polymer) of a low molecular weight liquid plasticizer such as dioctyl phthalate, together with a substantially equal or somewhat greater amount of a

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[4] Or offset the adhesive.

[5] A homogeneous mixture of a stable blend of a film-forming polymer of monomers, 70 parts of a copolymer of vinyl chloride or a major proportion of vinyl chloride, and a substantially non-volatile plasticizing material of at least ⅓ but not over ½ the weight of the polymer and at least the major proportion of the non-migrating viscous plasticizer resin.

[6] Exerting force of not more than about ten to 15 pounds.

[7] A eucohesive, water-insoluble, non-corrosive, normally tacky and pressure-sensitive rubber resin type thin coating. Eucohesive is defined to mean more cohesive than adhesive, the adhesive not coming off the backing when in rolls, or being handled.

[8] Not to exceed 20 parts per 100 parts of the vinyl polymer of a low molecular weight liquid plasticizer and a similar or somewhat greater amount of the higher molecular weight resinous type plasticizer.

[9] While the patent does not use the figure of 1,000 as the dividing line between high and low molecular weights, this record (as did the record in the Fourth Circuit case and its opinion) indicates the recognized existence in the art of such a classification of molecular weights.

[10] ". . . The novel article of our invention is a broadly new article of commerce. Prior to our invention there was no electrical or plastic tape available which was similar to the product of this invention either in performance characteristics or in appearance or handling characteristics. No pressure-sensitive adhesive tape was previously available

high molecular weight resinous type plasticizer. The specifications cite as suitable resinous type plasticizer, Paraplex G-25, or polymerized ethyl acrylate, and polymerized vinyl butyl ether.

The parties (plaintiff and Technical Tape Corporation) have stipulated that Tuck Vinyl Plastic Insulating Tapes were made and sold prior to the commencement of this suit and subsequent to the date of the issuance of the original patent, and that those tapes are pressure-sensitive stretchable and retractable vinyl plastic insulating tapes in which the backing film has a thickness of 4 to 20 mils. Further it is agreed that the tapes utilized as the backing member primarily vinyl films produced by Bakelite Company,[11] Ross & Roberts, and Monsanto Chemical Company.

Plaintiff stresses that no tape plasticized with Paraplex G-40 is involved in this suit (which tape was held in the

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which was of sufficient thickness (i.e., 4 to 20 mils) to provide suitable dielectric strength and yet of handling characteristics such that it was readily stretchable by hand pulling to an extent of at least 50% at room temperature and substantially completely slowly retractable from an elongation of 30% as herein specified. Again, no tape of such thickness and other properties was previously available to industry in which the backing film had high resistance to both hydrocarbon oils and water and also was in 'permanent equilibrium' with the pressure-sensitive adhesive coating, so as to avoid pastiness or tack loss of the adhesive. For these and other reasons, the novel article of this invention is a commercially new thing: it is a new type of tape, actually and commercially. There is no product in the prior art which resembled it, or was able to compete with it.

"Where the term 'rubber resin type' is used in defining the adhesive layer in the claims, it simply means a normally tacky and pressure-sensitive adhesive, such as one having properties of tack, pressure sensitivity, cohesiveness, et cetera, similar to the physical characteristics possessed by rubber resin, pressure-sensitive adhesives of the prior art."

Fourth Circuit suit not to be of an infringing nature) inasmuch as there was testimony that no G-40 film was furnished to Technical Tape after March, 1951.

Validity. The validity of this patent has been sustained[12] in prior litigation, and a review of this record furnishes no basis for a difference of opinion. Plaintiff concedes that the elements of the patented combination were old in the art, but contends that no one perceived even after extensive experimentation that the peculiar combination of low and high molecular weight plasticizers could effect a permanent equilibrium in the vinyl backing so that it would not migrate to the adhesive, causing its deterioration.

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[11] A stipulation discloses that this company's employees would testify that its proportions of plasticizers used would be:

		Parts of plasticizer per 100 parts of Vinyl polymer	Parts of each plasticizer per total plasticizer content
VUWA 50635	Paraplex G-40	33-50	100
VUWA 50907	Paraplex G-40	50-60	100
VUWB 59149	Flexol R2H		55
	Paraplex G 60		24
	Dioctyl Phthalate		21
	Total plasticizer content	33-50	100
VU 5946	Flexol R2H		85
	Paraplex G 60		15
	Total plasticizer content	50-60	100
KDA 2973	Flexol R2H	50-60	100

[12] *Sears, Roebuck and Company, et al. v. Minnesota Mining and Manufacturing Company*, 243 F. 2d 136 (4th Cir. 1957).

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Plaintiff cites the statutory presumption of validity (35 U. S. C. § 282) of a patent, buttressed as it is here by its issuance over the same patents cited in the file wrapper which are named in the court proceedings to defeat its validity (*Williams Mfg. Co.* v. *United Shoe Mach. Corporation*, 121 F. 2d 273 (6th Cir. 1941), affirmed 316 U. S. 364 (1942)).

The problem of poisoning of the adhesive was known for many years and its solution was studied without success by Tierney, Hurd, Danovitch and Schmidt, which fact plaintiff cites as indicative of invention (*Expanded Metal Company* v. *Bradford*, 214 U. S. 366 (1909); *Smith* v. *Snow, et al.*, 294 U. S. 1 (1935); *Reiner, et al.* v. *I. Leon Co., Inc.*, 285 F. 2d 501 (2nd Cir. 1960)).

The need for a pressure-sensitive stretchable and retractable tape was evident, but there was nothing available to fill the need. This factor, plaintiff points out, is indicative of invention in a product which fills the need (*Inland Mfg. Co.* v. *American Wood Rim Co.*, 14 F. 2d 657 (6th Cir. 1926); *Reiner, et al.* v. *The I. Leon Co., Inc.*, 285 F. 2d 501 (2nd Cir. 1960)) as is the imitation of the product by competitors (*Kurtz* v. *Belle Hat Lining Co., Inc.*, 280 Fed. 277 (2nd Cir. 1922); *Charles Peckat Mfg. Co., et al.* v. *Jacobs*, 178 F. 2d 794 (7th Cir. 1949)), especially where the elements to achieve the invention were long available (*Reiner, et al.* v. *I. Leon Co., Inc.*, 286 F. 2d 501 (2nd Cir. 1960); *Minnesota Mining and Mfg. Co.* v. *International Plastic Corporation, et al.*, 159 F. 2d 554 (7th Cir. 1947)), and even the inventor worked long to effect the invention (*Graver Tank & Mfg. Co., Inc., et al.* v. *Linde Air Products Co.*, 336 U. S. 271,

273 (1949)). The warm reception of the product also bolsters the conclusion of invention (*Wahl Clipper Corporation* v. *Andis Clipper Co., et al.*, 66 F. 2d 162 (7th Cir. 1933); *England* v. *Deere & Company*, 284 F. 2d 460 (7th Cir. 1960)). It was described as "revolutionary" by a supplier.

Consequential to the pioneer scope of this invention, plaintiff claims broad equivalence and interpretation of the patent (*Continental Paper Bag Company* v. *Eastern Paper Bag Company*, 210 U. S. 405 (1908); *Eibel Process Company* v. *Minnesota & Ontario Paper Company*, 261 U. S. 45 (1923); *Smith* v. *Snow, et al.*, 294 U. S. 1 (1935); *Chicago Patent Corporation* v. *Genco, Inc.*, 124 F. 2d 725 (7th Cir. 1941)).

None of the prior art citations reveal stretchable and retractable tape possessing permanent equilibrium. The most formidable citation, the Schmidt patent No. 2,332,265 (also a file wrapper citation), is differentiated by plaintiff as covering a much thinner—two mil—vinyl backing, with an adhesive that neither party to the instant suit uses. His tape is at least relatively non-stretchable. The evidence fails to disclose he ever marketed a stretchable, retractable pressure-sensitive tape; he did not achieve permanent equilibrium.[13] Similar and more serious deficiencies inhere in the allegedly anticipating patents of Kratz,[14] Semon,[15] Groff,[16] Wright,[17] Fikentscher,[18] Nowak,[19] Hemperly,[20] Eustis (two patents),[21] Marshall,[22] Endres,[23] and Nollau.[24]

[13] It is also maintained by plaintiff that to follow Schmidt's teachings would lead away from the patentees' invention. The tape backing used by Schmidt is coated with polyisobutylene, "a rather weak adhesive material" not suitable to plaintiff's tape nor used by it.

[14] Not a pressure-sensitive stretchable retractable adhesive tape.

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As the Court reads the Oace patent, including the italicized portions emphasizing the new material of the reissue, it is evident that the gist of the invention is the achieving of a permanent equilibrium in the vinyl backing of the stretchable tape so that the adhesive remains tacky for long periods of time although wound upon itself, and the tape is pliable for easy and efficacious application to an electrical splice or other wiring. The statements added by the reissue are more in the nature of a clarification of ideas theretofore disclosed than enlargement of the claimed invention.

There can be no serious quarrel with the legal principles stated by the defendants, such as the claims of a patent are the measure of the invention;[25] merely selecting a known material to meet known requirements does not constitute invention;[26] a patentee may not compel independent experimentation by others to ascertain the bounds of his claims;[27] a patentee may not, by claiming a product or method in

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[15] File wrapper patent not pressure-sensitive adhesive.

[16] File wrapper patent not pressure-sensitive adhesive.

[17] Not stretchable and retractable; nor pressure-sensitive adhesive.

[18] Not pressure-sensitive adhesive.

[19] Not pressure-sensitive adhesive.

[20] File wrapper reference; not stretchable and retractable.

[21] (No. 2,385,319) Not permanently pressure-sensitive, becoming non-tacky; not stretchable-retractable vinyl backing. (No 2,429,223) Electrical conductive metallic foil backing.

[22] Not vinyl backed pressure-sensitive adhesive; not stretchable and retractable.

[23] Not pressure-sensitive adhesive.

[24] Cloth, not polyvinyl chloride backing, not stretchable, retractable, nor insulating.

[25] *Graver Tank & Mfg. Co., Inc., et al.* v. *Linde Air Products Co.*, 336 U. S. 271 (1949); 35 U. S. C. § 112.

terms of a result, function or broad class, foreclose all means and ways of practically obtaining such results;[28] clear lack of invention cannot be outweighed by commercial success;[29] and the presumption of validity does not exist as against pertinent prior art which was not considered by the Patent Office.[30]

Similarly, as to defendants' further contentions that it is not the purpose of the patent laws to grant a monopoly for every trifling device;[31] omission of an element of a patent claim avoids infringement;[32] the doctrine of equivalence has no application where one of the elements of a patent claim is omitted;[33] reissue claims must be for the same invention as originally disclosed, or they are void;[34] and ambiguous, indefinite and vague patent claims are void.[35] These are excellent legal cliches that under proper circumstances and with record that would support their application should be applied. Defendants, however, have neither the proper circumstances nor a record that make these statements appropriate to their cause.

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[26] *Johnson Laboratories, Inc.* v. *Meissner Mfg. Co., et al.*, 98 F. 2d 937 (7th Cir. 1938); *Sinclair & Carroll Co., Inc.* v. *Interchemical Corporation*, 325 U. S. 327 (1945).

[27] *Standard Oil Co. of California* v. *Tide Water Associated Oil Co.*, 154 F. 2d 579 (3rd Cir. 1946).

[28] *Holland Furniture Company* v. *Perkins Glue Company*, 277 U. S. 245, 255-258 (1928); *National Carbon Co., Inc.* v. *Western Shade Cloth Co.*, 93 F. 2d 94 (7th Cir. 1937).

[29] *Dow Chemical Co.* v. *Halliburton Oil Well Cementing Co.*, 324 U. S. 320 (1945).

[30] *Day-Brite Lighting, Inc.* v. *Sandee Manufacturing Co.*, 286 F. 2d 596 (7th Cir. 1960).

[31] *Atlantic Works* v. *Brady*, 107 U. S. 192 (1883).

[32] *U. S. Industrial Chemicals, Inc.* v. *Carbide & Carbon Chemicals Corp.*, 315 U. S. 668 (1942).

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Validity is also challenged on the ground that the reissue patent is invalid because not for the same invention as the original patent.[36] Plaintiff ascribes a different and broader viewpoint to construction of "sameness" of the original and reissue patent[37] as permitting a clarification,[38] and points out that a reissue granted after a contest in the Patent Office raises a strong presumption in its favor.[39] The supplemental oaths of the inventors in applying for the reissue pointed out the necessity for clarification.

The Court is of the opinion that the Patent Office properly granted the reissue, it being not a widening of the original invention claimed but simply a clarification, elimi-

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[33] *Sears, Roebuck and Company, et al.* v. *Minnesota Mining and Manufacturing Company*, 249 F. 2d 66 (4th Cir. 1957).

[34] *U. S. Industrial Chemicals, Inc.* v. *Carbide & Carbon Chemicals Corp.*, 315 U. S. 668 (1942); *Kalich, et al.* v. *Paterson Pacific Parchment Co.*, 137 F. 2d 649 (9th Cir. 1943).

[35] *The Incandescent Lamp Patent*, 159 U. S. 465 (1895).

[36] *U. S. Industrials Chemicals, Inc.* v. *Carbide & Carbon Chemicals Corp.*, 315 U. S. 668 (1942); *Kalich, et al.* v. *Paterson Pacific Parchment Co.*, 137 F. 2d 649 (9th Cir. 1943).

[37] *American Automotoneer Co., et al.* v. *Porter*, 232 F. 456 (6th Cir. 1916). The Court in *Minnesota Mining and Manufacturing Company* v. *Sears, Roebuck and Company*, 141 F. Supp. 686 (D. C. N. C. 1956), said at p. 689: "The specification of the reissue is the same as the original patent except comment on the novelty of the tape and definition of terms. There are no additional disclosures of a tape or how to make it. The claims of the reissue appear to embody nothing not disclosed in the original application and invention and they do not broaden the disclosures of the original patent but are further descriptive of the teachings of the original patent."

[38] *Engineering Development Laboratories* v. *Radio Corporation of America*, 153 F. 2d 523 (2nd Cir. 1946).

[39] *Weller Mfg. Co.* v. *Wen Products, Inc.*, 121 F. Supp. 198 (D. C. Ill. 1954); aff'd 231 F. 2d 797 (7th Cir. 1956); *Hoeltke* v. *Kemp Mfg. Co.*, 80 F. 2d 912 (4th Cir. 1936).

nating discrepancy betwgen claims and specifications and failure adequately to claim their invention.

The tapes made with VU 5946 were found by the District Court (C. A. 879-G; North Carolina) to infringe. This Bakelite film VU 5946 has been proved to be constituted of two plasticizers, that of R-2H and Paraplex G-60. The R-2H (marketed by Carbide & Carbon Chemical Corporation) was found to be a viscous, non-migrating alkyd plasticized resin of the polyester type, like Paraplex G-25 and Paraplex G-40. Flexol R-2H was analyzed to have (1) as 17% of its plasticizer, a number average 765 molecular weight, and (2) 83% of the plasticizer, a number average molecular weight of 1400.

Paraplex G-50 the evidence discloses had (1) a low fraction constituting 14% of the plasticizer weight, of number average molecular weight of 630, and (2) a high fraction, constituting 86% of number average molecular weight of 1619. Bakelite VU 59149 contains as 45% of the total plasticizer, a low plasticizer of DOP and G-60 (1000 number average molecular weight) and Flexol R-2H.

Monsanto's Admex 761 was found on analysis to be composed of (1) 12.8% of plasticizer, a number average molecular weight of 608, and (2) 65.2% of plasticizer, a 1122 number average molecular weight (22% of the plasticizer backing was not extracted).

The tapes of defendants charged to infringe are known as "Tuck" Vinyl Plastic Insulating Tape and "Tuck" Vinelectric Tape, sold under numbers 330 and 220.[40]

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[40] Claims 1, 3, 4, 6, 7, 8 and 9 are charged to be infringed by:
(1) Type B, Ross & Roberts vinyl film plus Rohm and Haas G-50 manufactured by New York defendant.

Appendix B

The Court concludes that the reissue covers a valid, patentable invention, which is entitled to broad interpretation and range of equivalence.[41]

Infringement. Claims 1, 3 and 4 of the original patent are charged to be infringed[42] on the basis of the doctrine of equivalence, and claims 6, 7, 8 and 9 of the reissue are asserted to be literally infringed. Plaintiff points out that the tapes here involved are not plasticized with G-25 or G-40, the only plasticizers passed upon the Court of Appeals for the Fourth Circuit, which reversed the District Court's (North Carolina) finding of infringement. Plain-

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(2) KDA 2973 (Bakelite vinyl film Flexol R-2H) also manufactured by New York defendant.

(3) Monsanto Ultron R-187, plasticized with Arther-Daniels-Midland Admex 761 film.

Claims 1, 3 and 4 of original patent (under doctrine of equivalents) are further charged to be infringed by products of Technical Tape Corporation (New York) thus constituted:

Bakelite's vinyl film VUWB 59149 contains 33-50 parts plasticizers of which plasticizer contents 55 parts are Flexol R-2H, 24 parts Paraplex G-60, and 21 parts dioctyl phthalate.

Bakelite's vinyl film VU5946 (formerly VUWB 59420) contains 50 to 60 parts plasticizer of which plasticizer 85 parts are Flexol R-2H and 15 parts are Paraplex G-60 (tape using this vinyl film was found to infringe in *Minnesota Mining and Manufacturing Company* v. *Pine State*).

Type B film of Ross and Roberts film employing 55.2 part of G-50.

[41] *Continental Paper Bag Company* v. *Eastern Paper Bag Company*, 210 U. S. 405 (1908); *Miller* v. *Eagle Manufacturing Company*, 151 U. S. 186 (1894); *Eibel Process Company* v. *Minnesota & Ontario Paper Company*, 261 U. S. 45 (1923); *Specialty Equipment and Machinery Corp.* v. *Zell Motor Car Co., et al.*, 193 F. 2d 515 (4th Cir. 1952); *Smith* v. *Snow, et al.*, 294 U. S. 1 (1935); *Chicago Patent Corporation* v. *Genco, Inc.*, 124 F. 2d 725 (7th Cir. 1941); *Raybestos-Manhattan, Inc.* v. *Texon, Inc.*, 268 F. 2d 839 (1st Cir. 1959).

[42] By products sold before June 29, 1954, the date of the reissue.

tiff additionally points out that the plasticizers used in the tapes here alleged to infringe were proved by analyses to contain both high and low molecular weight plasticizers. The evidence discloses a substantial proportion of liquid, low molecular weight non-resinous plasticizer.

It is plaintiff's position that its expert, Dr. Wall's analyses of the plasticizers in the accused tapes revealed the presence of two plasticizers, of both high and low molecular weights, and the low molecular weight fraction was non-resinous. Therefore, the finding of non-infringement by the Fourth Circuit on a different tape, with different plasticizers there found to be wholly resinous, is inapplicable here.

Plaintiff also maintains that the Fourth Circuit's finding of non-infringement (as to a tape not here involved) is predicated upon an unwarranted assumption that the Oace patent requires the plasticizer not to be wholly resinous, when the patent makes no such requirement. In any event, it maintains the record in the instant case much more clearly and specifically proves that the allegedly infringing tapes definitely contain the two kinds of plasticizers, and that the low molecular plasticizer is in fact non-resinous, a liquid ester plasticizer, mobile and migratory, equivalent to dioctyl phthalate (DOP) of the patent.[43]

The plaintiff points out that there can be no question on the issue of infringement that defendants' insulating

[43] Plaintiff states G-50, R-2H, and Admex 761 are proved to be composed of "2 different materials, premixed by synthesis, one viscous and resinous, with a range of molecular weights above 1000, the other a liquid ester of low molecular weight (less than 1000) and free flowing."

tapes charged to infringe are stretchable-retractable and possessing permanent equilibrium and are between 4 and 20 mils thickness, so that the only question remaining is that of the use of double or dissimilar plasticizers in the vinyl backing. It further points out that defendants' tapes are wound upon themselves without liners, yet are unwindable without delamination or offsetting of the adhesive, yet the adhesive does not get pasty or lose its tack. They are water-insoluble and hydrocarbon oil-insoluble, and have high dielectric strength. Defendants even imitate plaintiff's numbering of their tapes, adding a zero to the Nos. 22 and 33 of the plaintiff, and calling their tapes Nos. 220 and 330.

While infringement can be avoided by the failure to use a material element of the claim of a patent, such infringement is not avoided where all elements are utilized in a combined form. This fundamental principle was recently stated in a Seventh Circuit Court of Appeals opinion in this way:

> "Infringement is not avoided by making into one part that which has been shown as two where there is no change in function or manner of operation of the element." (*Zysset, et al.* v. *Popeil Brothers, Inc.*, 276 F. 2d 354, 357 (1960)).

Similar holdings are *Hydraulic Press Mfg. Co.* v. *Williams, White & Co.*, 165 F. 2d 489 (7th Cir. 1947); *Borg-Warner Corp. v. Mall Tool Co.*, 217 F. 2d 850 (7th Cir. 1954); *Simplex Appliance Co.* v. *Star Can Opener Co.*, 37 F. 2d 491 (7th Cir. 1930); Corpus Juris Secundum, "Patents," § 298, p. 867.

Especially easy would an infringement of a chemical patent be if a contrary rule were to obtain because of the

facility of mixture of the chemical components. Defendants in this case utilized products manufactured by others, which materials were composed of high and low molecular weight plasticizers. The purchased items incorporated in a vinyl backing were then combined with the pressure-sensitive adhesive and the resulting products had the identical advantageous qualities of the patented invention, functioning in the same way.

The record is replete with the testimony of the experts as to the constituent elements of Flexol R-2H, Paraplexes G-25, G-40, G-50 and G-60; and Admex 761. Inconsistencies and disputes occur. The Court is of the opinion, however, that the testimony of actual analyses of the accused tapes must be accorded greater weight than the somewhat vague testimony of the witnesses connected with the firms manufacturing the said items. The testimony of Doctor Wall is not directly conflicting with the testimony of others inasmuch as their testimony pertains to chemcial properties other than those of immediate pertinency to a determination of scope and infringement of the patent sued upon.

The various accused tapes contained as plasticizers G-50, G-60, Flexol R-2H, and Admex 761. Dr. Wall's testimony clearly established that his tests of the component parts of those materials showed high and low molecular weight plasticizers.[44]

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[44] G-50, with type B Ross and Rohrts, had 14% of 630 low molecular weight and 86% of higher molecular weight of 1619; Flexol R-2H composed of KDA 2973, VUWB 59149 and VU5946 had 17% of low molecular weight of 765, and 83% of high molecular weight of 1394; Admex 761 containing Ultron R-187 had 10.2% of low, 502, molecular weight, and 89.8% high, 1698, molecular weight.

Appendix B

Plaintiff's expert testimony conclusively establishes that the low molecular weight plasticizers of the accused tapes were non-resinous, serving to achieve permanent equilibrium, and that tests with but one of the plasticizers resulted in migration. Plaintiff points out that it uses the word "equivalent" in its legal, and not chemical, sense, which is permissible under precedent,[45] and that this substitution is a physical equivalent. It is also stressed that the variations in proportions of the two plasticizers to each other and to the total vinyl chloride polymer used in the tapes are recognized in the patent's teachings to depend on the nature of the respective plasticizers themselves. Plaintiff points out that while but three of the five allegedly infringing tapes have a phthalyl ester present, the remaining two have adipyl esters which plaintiff's experts deemed equivalent, so than infringement was not avoided.

Plaintiff refutes the soundness of the testimony relied upon by defendants as challenging Dr. Wall's findings on the ground that their quotation are taken out of context; as being with reference to outdated experience; or involving a play on words; or the making of vague or qualified statements, or statements not based on personal knowledge. It is very apparent that these are diversionary tactics used in an attempt to prejudice or lead the court to adopt a position that is legally untenable. Plaintiff further notes that the manufacturers of the plasticizers used in the accused tapes made no fractionation tests in the period involved. Plaintiff further points out that defendants do not trouble

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[45] Walker, Patents, Deller's Edition, Vol. 3, Sec. 490, p. 1740; *Welsbach Light Co.* v. *Sunlight Lamp Co.*, 87 F. 221 (2nd Cir. 1898).

to refute infringement of their tapes made on Bakelite Films VU5946 and VUWB 59149.

The Court is of the opinion that the charge of infringement has been completely sustained by the proof of plaintiff's experts that fractionation analyses revealed upon examination of the accused tapes, the presence of two plasticizers possessing respectively high and low number average molecular weights as taught by the Oace patent; that use of but one of the plasticizers so procured by fractionation was not sufficient to preclude migration, and loss of tack. The Court deemed Dr. Wall, completely credible, possessing admirable expert qualifications, and was impressed by his testimony relative to the tests he performed in determining the chemical content of the defendants' accused tapes.

The Court concludes therefore that the tapes using Bakelite film VUWB 59149 utilizing R-2H, G-60 and DOP, and VU 5946, infringe claims 1, 3 and 4, the original claims, and the other tapes infringe 1, 3, 4, 6, 7, 8 and 9.

The Court adopts the Findings of Fact and Conclusions of Law submitted by the plaintiff. Plaintiff is directed to submit an order consistent with this decision and said Findings of Fact and Conclusions of Law within ten days.

EDWIN A. ROBSON
Judge

December 5, 1961

Appendix C

TITLE 35 U. S. C. § 112. SPECIFICATION

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Appendix D

UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF ILLINOIS

UNITED STATES OF AMERICA *v.* MINNESOTA MINING AND MANUFACTURING COMPANY, *Defendant.*	CRIMINAL ACTION No. 61-73-D (15 U. S. C. §§ 1 and 2)

INDICTMENT

The grand jury charges:

COUNT ONE

I

DEFENDANT

1. Minnesota Mining and Manufacturing Company (hereinafter referred to as "Minnesota") is hereby indicted and made a defendant herein. Minnesota is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business in St. Paul, Minnesota.

II

TRADE AND COMMERCE

2. Minnesota is a manufacturer and seller of a broad range of products. It has grown rapidly, having increased

its annual sales from $_____ in 1931 to $_____ in 1960 and having increased its assets from $_____ in 1931 to $_____ in 1960.

3. Among the products made and sold by Minnesota is pressure sensitive tape, which term, as used herein, shall mean any adhesive product which includes a backing of sheet or film of non-fibrous or unwoven fibrous material, or both, with a pressure sensitive adhesive material applied to any portion of a surface of said backing element (but the term shall not include products manufactured and distributed for surgical or medical purposes). Pressure sensitive tape adheres to an object upon contact under slight pressure and does not require moistening. Under the brand name, "Scotch," Minnesota sells various types of pressure sensitive tapes such as cellophane, paper masking, vinyl plastic, filament or strand laminated, and acetate fiber tapes. Said products are sometimes referred to hereinafter as "tapes."

4. Pressure sensitive tape first came into extensive use in this country about 1927, after an introduction of spray painting of automobiles had created a large demand for a masking tape. For the covering of surfaces not to be painted, paper masking tape proved superior to the cloth tape then in use. As spray painting increased and as other uses for the product were discovered, such as protecting objects during shipment, attaching labels, etc., paper masking tape sales grew rapidly, and today this type of tape accounts for the largest volume of sales of all varieties of pressure sensitive tape. Transparent cellophane tape came into use

in the early 1930's and was immediately applied for numerous purposes such as sealing packages, repairing articles, printing labels, etc. Its popularity increased to a point where it now is the second largest seller among pressure sensitive tapes.

5. During the 1940's, a waterproof combination tape, which combined other backings with an acetate film, was employed for heavier-duty use, such as carton sealing and splicing. This tape was called acetate fiber and it continues to enjoy substantial use. Another tape, the sale of which has grown rapidly since the late 1940's, is vinyl plastic tape. This tape has largely displaced friction, or "bicycle" tape, where insulation from electricity is desired and also has become an all-purpose tape. In the 1950's, filament or strand laminated tape, which is a tape strengthened with numerous parallel strands of threads, was employed to wrap and seal heavy cartons and packages. Made with a backing of paper or acetate film and with threads of either rayon, nylon or glass fiber, it began displacing steel strapping on boxes or cartons. Filament tapes are widely employed in transporting or storing goods where high strength is required.

6. The above described tapes as well as other pressure sensitive tapes of lesser use are practically indispensable to industrial concerns, Government agencies, offices, stores, and the general public for a host of purposes. Since 1927, this industry has grown until its annual sales volume in the United States in 1960 amounted to approximately $175,000,000. Minnesota is and has been since 1927 by far the largest manufacturer and seller of pressure sensitive

tapes in the United States and its 1960 sales of such products exceeded $100,000,000.

7. During the period of time covered by this indictment, Minnesota has engaged in the manufacture of pressure sensitive tapes at plants located in the States of Illinois, Minnesota and Pennsylvania. During this period, Minnesota has solicited and received orders for pressure sensitive tapes from customers located in States other than those where its plants were located and in foreign countries and, pursuant to such orders, has sold and shipped substantial amounts of such products to said customers located in other States of the United States and in foreign countries. Thus, during the period of time covered by the indictment, there was a regular, continuous and substantial flow of said tapes from Minnesota's plants to customers located in other States of the United States and in foreign countries.

III

Offense Charged

Attempt to Monopolize

8. Beginning in or about 1931, the exact date being to the grand jurors unknown, and continuing thereafter up to and including the date of the return of this indictment, the defendant and others to the grand jurors unknown have been engaged in an attempt to monopolize the above described interstate and foreign trade and commerce in the manufacture and sale of pressure sensitive tapes in violation of Section 2 of the Act of Congress of July 2, 1890 (15 U. S. C. § 2), commonly known as the Sherman Act.

Appendix D

9. Pursuant to and in furtherance of the aforesaid attempt to monopolize, defendant has done, among other acts, the following:

(a) Embarked upon a program of controlling the tape industry by systematically coercing competitors to accept patent license agreements, which would give Minnesota domination over the competitors' manufacture and sale, by suing or threatening to sue for infringement of United States Letters Patent;

(b) Required or attempted to require its competitors to enter into patent license agreements with Minnesota containing some or all of the following restrictive terms and conditions:

(1) Minnesota could fix and establish the minimum prices, most favorable terms of sale, the classes of buyers, the types of tape which could be manufactured, and the manner of making and distributing the tape; the licensee would be prohibited from making or distributing under the agreement except as specified by Minnesota;

(2) The rate of royalty payable to Minnesota would increase as licensee's sales increase;

(3) Licensee would be prohibited from selling tape under a brand name other than its own or from selling to a customer, knowing the tape would be resold under a private brand name;

(4) Licensee would be required to assist Minnesota in any patent litigation against others by giving testimony and other evidence;

(5) Licensee could be required to give Minnesota a royalty-free license under any patent relating

to tape that licensee obtained which was dominated by Minnesota's patents relating to tape, and, when licensee's patent was not so dominated, Minnesota could demand a license under the same terms contained in the existing agreement;

(6) Licensee would be prohibited from exporting tape or selling to those whom it knew would export, and licensee would mark tape with language similar to the following: "Licensed for use in the United States only and not to be exported";

(7) Licensee would be barred from selling tape in specified fields of use;

(8) Licensee would be prohibited from manufacturing sandpaper;

(9) Any customer to whom Minnesota sells a private label tape would be required to adhere to the minimum prices and terms of sale referred to in subparagraph (1) hereof;

(10) Licensor, upon licensee's demnad, would sue an unlicensed tape competitor for patent infringement, with licensee sharing expenses of litigation;

(c) Sought to eliminate actual and potential competition with respect to tape through the prosecution or threat of patent infringement suits;

(d) Agreed with Johnson & Johnson (hereinafter referred to as "J & J") to refrain from the manufacture and sale of surgical tape so long as J & J refrained from the manufacture and sale of sandpaper;

(e) Agreed with Minnesota's competitors to fix and maintain uniform and non-competitive prices and terms of sale, the classes of buyers, the types of tapes which could be manufactured, and the manner of making and distributing such products;

(f) Acquired or attempted to acquire the ownership or assets of tape competitors, customers, or suppliers of tape manufacturers in order to eliminate or foreclose competition;

(g) Assigned certain patent applications on filament tape to J & J and thereafter took a patent license agreement with J & J as the licensor, under which, among other things:

(1) Minnesota was granted a preferential royalty rate substantially lower than that offered to Minnesota's competitors;

(2) Upon Minnesota's demand, J & J was required to sue infringers with Minnesota sharing the costs of litigation, and Minnesota agreed to assist J & J in any patent litigation;

(3) J & J determined the types of licensed products that could be made and their manner of manufacture, and Minnesota agreed not to manufacture such products other than as specified by J & J;

(4) Minnesota would not sell a private label tape unless J & J did so;

(5) Minnesota could be required to give J & J a royalty-free license under any patent Minnesota obtained which was dominated by J & J's patents, and when Minnesota's patent was not so dominated, J & J could demand a license under

the same terms and conditions contained in the existing agreement.

IV

Effects

10. The aforesaid offense in the industry described has had, among other things, the following effects:

(a) Federal and State agencies, industrial concerns, educational institutions, distributors, retailers, the general public, and others have been deprived of the benefits of free and open competition in the development, manufacture, and distribution of tapes;

(b) Actual and potential competition in the tape industry has been excluded, eliminated and curtailed;

(c) Manufacturers of tape have been subjected to restrictions and restraints in manufacturing and selling tape which impaired their ability to compete with Minnesota;

(d) The progress of science and the useful arts has been discouraged and hampered, and the patent laws of the United States have been used for purposes inconsistent with their constitutional basis;

(e) Interstate and foreign commerce in tape has been substantially and unreasonably burdened and impeded.

V

Jurisdiction and Venue

11. The offense charged in this count of this indictment has been carried out in part within the Eastern District of

Illinois and within the jurisdiction of this Court. During the period of time covered by this count of this indictment, and within five years preceding the return thereof, Minnesota has performed acts within the Eastern District of Illinois in furtherance of the offense hereinabove described.

COUNT TWO

12. The allegations contained in paragraphs 1 through 7 of this indictment are here realleged with the same force and effect as though set forth in full.

VI

Co-Conspirators

13. Various corporations and individuals not made defendants herein have participated as co-conspirators with the defendant in the offense charged in this count of this indictment and performed acts and made statements in furtherance of said offense. Said co-conspirators, some of them being known to the grand jurors and others being to the grand jurors unknown, include among them the following listed corporations, each of which is organized and existing under the laws of the State designated:

Name of Corporation	State of Incorporation	Principal Place of Business
Johnson & Johnson	New Jersey	New Brunswick, N. J.
Permacel-LePage's, Inc.	New Jersey	New Brunswick, N. J.
Permacel Tape Corporation	New Jersey	New Brunswick, N. J.
Industrial Tape Corporation	New Jersey	New Brunswick, N. J.
The Revolite Corporation	New Jersey	New Brunswick, N. J.
The Kendall Company	Massachusetts	Boston, Massachusetts
Norton Company	Massachusetts	Worcester, Massachusetts
The Seamless Rubber Company	Connecticut	New Haven, Connecticut
Johns-Manville Corporation	New York	New York, New York

Appendix D

VII

Offense Charged

Combination and Conspiracy in Restraint of Trade

14. Beginning in or about 1933, the exact date being to the grand jurors unknown, and continuing thereafter up to and including the date of the return of this indictment, the defendant and co-conspirators have engaged in a combination and conspiracy in unreasonable restraint of the aforesaid interstate and foreign trade and commerce in pressure sensitive tapes in violation of Section 1 of the Act of Congress of July 2, 1890 (15 U. S. C. § 1), commonly known as the Sherman Act.

15. The aforesaid combination and conspiracy has consisted of a continuing agreement, understanding, and concert of action among the defendant and co-conspirators, the substantial terms of which have been and are that they agree:

(a) To fix, establish and maintain the minimum prices and most favorable terms of sale, the classes of buyers, the types of pressure sensitive tapes to be made, and the manner of making and distributing such tapes;

(b) To amass patents relating to pressure sensitive tapes for the purpose of coercing competitive manufacturers and sellers into signing restrictive license agreements or excluding them from the pressure sensitive tape industry;

(c) To exclude actual and potential competitive manufacturers and sellers from the pressure sensitive tape industry through patent infringement suits or threats

thereof, licensees to give testimony in licensor's behalf in such suits;

(d) To restrict export sales of pressure sensitive tape in competition with Minnesota.

16. In effectuating and carrying out the aforesaid combination and conspiracy, the defendant and co-conspirators, by agreement, understanding and concert of action have done the acts which, as hereinbefore alleged, they agreed to do.

VIII

Effects and Jurisdiction and Venue

17. The allegations contained in paragraphs 10 and 11 are here realleged with the same force and effect as though set forth in full.

COUNT THREE

18. The allegations contained in paragraphs 1 through 7 and paragraph 13 of this indictment are here realleged with the same force and effect as though set forth in full.

IX

Offense Charged

Combination and Conspiracy to Monopolize

19. Beginning in or about 1933, the exact date being to the grand jurors unknown, and continuing thereafter up to and including the date of the return of this indictment, the defendant and co-conspirators have engaged in a combination and conspiracy to monopolize the aforesaid interstate and foreign trade and commerce in pressure sensitive

tapes in violation of Section 2 of the Act of Congress of July 2, 1890 (15 U. S. C. § 2), commonly known as the Sherman Act.

20. The allegations contained in paragraphs 15 and 16 are here realleged with the same force and effect as though set forth in full.

X

Effects and Jurisdiction and Venue

21. The allegations contained in paragraphs 10 and 11 are here realleged with the same force and effect as though set forth in full.

COUNT FOUR

22. The allegations contained in paragraphs 1 and 2 of this indictment are here realleged with the same force and effect as though set forth in full.

23. Among the products made and sold by Minnesota are magnetic recording media, which term, as used herein, shall mean any product composed of magnetically susceptible ferromagnetic iron oxide coated on, dispersed within, or otherwise disposed in contact with, non-magnetic material such as plastics, paper, cloth, or any other non-magnetic solid material. Such products are sometimes referred to hereinafter as "media." Magnetic recording media, such as the tape used on a tape recorder, first came into general use in this country about 1946, when magnetic sound recordings were being made through use of wire and wire recorders. It was quickly recognized that tape recording was superior to wire recording and, as sales of tape re-

corders increased, so also did the sales of magnetic recording tape. More recently, various tapes and other kinds of media have been employed in high-speed recording of various signals in the fields of rocketry, ballistic missiles, and space vehicles, as well as in data processing and memory recording. Another application of such media is the use of video tapes for transcriptions and telecasting of sound and pictures. Industry sales of magnetic recording media in the United States have mounted rapidly, reaching a total of approximately $ in 1960. Minnesota is and has been since 1947 by far the largest manufacturer and seller of media in the United States, and its 1960 sales surpassed $.

24. Throughout the period of time covered by this indictment, Minnesota has engaged in the manufacture of magnetic recording media at a plant located in the State of Minnesota. During this period, Minnesota has solicited and received orders for media from customers located in States other than the State where its plant was located and, pursuant to such orders, has sold and shipped substantial amounts of such products to said customers in other States of the United States. Thus, during the period of time covered by the indictment, there was a regular, continuous, and substantial flow of such media from Minnesota's plant to customers located in other States of the United States.

XI

[Offense Charge]

Attempt to Monopolize

25. Beginning in or about 1946, the exact date being to the grand jurors unknown, and continuing thereafter up to

and including the date of the return of this indictment, the defendant and others to the grand jurors unknown have been engaged in an attempt to monopolize the above described interstate and foreign trade and commerce in the manufacture and sale of magnetic recording media in violation of Section 2 of the Act of Congress of July 2, 1890 (15 U. S. C. § 2), commonly known as the Sherman Act.

26. Pursuant to and in furtherance of the aforesaid attempt to monopolize, defendant has done, among other acts, the following:

(a) Embarked upon a program of controlling the media industry by systematically coercing competitors to accept patent license agreements, which would give Minnesota domination over the competitors' manufacture and sale, by suing or threatening to sue for infringement of United States letters patent;

(b) Attempted to require its competitors to enter into patent license agreements with Minnesota containing some or all of the following restrictive terms and conditions:

(1) Minnesota could fix and establish the minimum prices, most favorable terms of sale, the classes of buyers, the types of media which could be manufactured, and the manner of making and distributing the media; the licensee would be prohibited from making or distributing under the agreement except as specified by Minnesota;

(2) Licensee would be prohibited from selling the media under a brand name other than its own or from selling to a customer, knowing the

media would be resold under a private brand name;

(3) Licensee would be required to assist Minnesota in any patent litigation against others by giving testimony and other evidence;

(4) Licensee could be required to give Minnesota a royalty-free license under any patent relating to media that licensee obtained which was dominated by Minnesota's patents relating to media and, when licensee's patent was not so dominated, Minnesota could demand a license under the same terms contained in the existing agreement;

(5) Licensee would be prohibited from exporting media or selling to those whom it knew would export, and licensee would mark the media with language similar to the following: "Licensed for use in the United States only and not to be exported";

(6) Licensee would be barred from selling media in specified fields of use.

(c) Sought to eliminate actual and potential competition with respect to media through the prosecution or threat of patent infringement suits;

(d) Induced Armour to attempt to eliminate any existing rights of others to operate under the patents or patent applications licensed to Minnesota and to give to Minnesota Armour's technical information and knowledge concerning media while denying said information and knowledge to all others.

Appendix D

XII

Effects

27. The aforesaid offense in the industry described has had, among other things, the following effects:

(a) Federal and State agencies, industrial concerns, educational institutions, distributors, retailers, the general public, and others have been deprived of the benefits of free and open competition in the development, manufacture and distribution of media;

(b) Actual and potential competition in the media industry has been excluded, eliminated and curtailed;

(c) Manufacturers of media have been subjected to restrictions and restraints in manufacturing and selling media which impaired their ability to compete with Minnesota;

(d) The progress of science and the useful arts has been discouraged and hampered, and the patent laws of the United States have been used for purposes inconsistent with their constitutional basis;

(e) Interstate commerce has been substantially and unreasonably burdened and impeded.

XIII

Jurisdiction and Venue

28. The offense charged in this count of this indictment has been carried out in part within the Eastern District of Illinois and within the jurisdiction of this Court. During the period of time covered by this count of this indictment, and within five years preceding the return thereof, Minnesota has performed acts within the Eastern District of Illinois in furtherance of the offense hereinabove described.

Appendix D

COUNT FIVE

29. The allegations contained in paragraphs 1, 2, 23 and 24 of this indictment are here realleged with the same force and effect as though set forth in full.

XIV

Co-Conspirators

30. Various corporations and individuals not made defendants herein have participated as co-conspirators with the defendant in the offense charged in this count of this indictment and performed acts and made statements in furtherance of said offense. Said co-conspirators, some of them being known to the grand jurors and others being to the grand jurors unknown, included among them Armour Research Foundation of Illinois Institute of Technology (hereinafter referred to as "Armour"), a non-profit corporation organized and existing under the laws of the State of Illinois with its principal place of business in Chicago, Illinois.

XV

Offense Charged

Combination and Conspiracy in Restraint of Trade

31. Beginning in or about 1947, the exact date being to the grand jurors unknown, and continuing thereafter up to and including the date of the return of this indictment, the defendant and co-conspirators have engaged in a combination and conspiracy in unreasonable restraint of the aforesaid interstate and foreign trade and commerce in magnetic recording media in violation of Section 1 of the Act of Congress of July 2, 1890 (15 U. S. C. § 1), commonly known as the Sherman Act.

Appendix D

32. The aforesaid combination and conspiracy has consisted of a continuing agreement, understanding, and concert of action among the defendant and co-conspirators, the substantial terms of which have been and are that they agree:

(a) To fix, establish and maintain the minimum prices and most favorable terms of sale, the classes of buyers, the types of media to be made, and the manner of making and distributing such media;

(b) To amass patents on media for the purpose of coercing competitive manufacturers and sellers into signing restrictive license agreements or excluding them from the media industry;

(c) To exclude actual and potential competitive manufacturers and sellers from the media industry through patent infringement suits or threats thereof, licensees to give testimony in licensor's behalf in such suits;

(d) Armour would use its other patents on recording devices as a means of requiring a licensee under such patents to purchase iron oxide powder from Minnesota for use only as specified by Minnesota;

(e) Armour would attempt to eliminate any existing rights of others to operate under the media patents or patent applications licensed to Minnesota, and would give Minnesota its technical information and knowledge concerning media while denying said information and knowledge to all others.

33. In effectuating and carrying out the aforesaid combination and conspiracy, the defendant and co-conspirators by agreement, understanding, and concert of action have

done the acts which, as hereinbefore alleged, they agreed to do.

XVI

EFFECTS AND JURISDICTION AND VENUE

34. The allegations contained in paragraphs 27 and 28 of this indictment are here realleged with the same force and effect as though set forth in full.

COUNT SIX

35 The allegations contained in paragraphs 1, 2, 23, 24 and 30 of this indictment are here realleged with the same force and effect as though set forth in full.

XVII

OFFENSE CHARGED

Combination and Conspiracy to Monopolize

36. Beginning in or about 1947, the exact date being to the grand jurors unknown, and continuing thereafter up to and including the date of the return of this indictment, the defendant and co-conspirators have engaged in a combination and conspiracy to monopolize the aforesaid interstate and foreign trade and commerce in magnetic recording media in violation of Section 2 of the Act of Congress of July 2, 1890 (15 U. S. C. § 2), commonly known as the Sherman Act.

37. The allegations contained in paragraphs 32 and 33 of this indictment are here realleged with the same force and effect as though set forth in full.

Appendix D

XVIII

EFFECTS AND JURISDICTION AND VENUE

38. The allegations contained in paragraphs 27 and 28 of this indictment are here realleged with the same force and effect as though set forth in full.

COUNT SEVEN

39. The allegations contained in paragraphs 1 and 2 of this indictment are here realleged with the same force and effect as though set forth in full.

40. Among the products made and sold by Minnesota are aluminum presensitized lithographic plates, which term, as used herein, shall mean any product composed of a thin substantially flat sheet of aluminum containing at least one surface of a light-sensitive hydrophobic-hydrophylic type coating. Such products are sometimes referred to hereinafter as "plates."

41. Lithography, one of the principal methods of printing, operates on the principle that grease and water are mutually repellent. Lithographic plates made of zinc or other materials have been used for many years, the printer applying chemicals to the surface preparatory to its use in order to make it light sensitive. The development of aluminum presensitized lithographic plates eliminated this costly and time-consuming operation on the printer's part, and such plates are now widely employed by printers and lithographers for printing runs usually of less than thirty thousand impressions. While some of the plates are pre-

pared in special sizes for custom work, the bulk of them are made in sizes suitable for the popular printing presses. Since their introduction in this country beginning about 1948, said plates have enjoyed rapidly increasing sales in the United States, totalling approximately $ in 1960. Minnesota is and has been since 1951 by far the largest manufacturer and seller of such plates in this country, and its 1960 sales of such products exceeded $.

42. During the period of time covered by this indictment, Minnesota has engaged in the manufacture of aluminum presensitized lithographic plates at a plant located in the State of Minnesota. Within this time, Minnesota has solicited and received orders for plates from customers located in States other than the State where its plant was located and, pursuant to such orders, has sold and shipped substantial quantities of such plates to said customers located in other States of the United States. Thus, during the period of time covered by the indictment, there was a regular, continuous, and substantial flow of said plates from Minnesota's plant to customers located in other States of the United States.

XIX

Offense Charged

Attempt to Monopolize

43. Beginning in or about 1950, the exact date being to the grand jurors unknown, and continuing thereafter up to and including the date of the return of this indictment, the defendant and others to the grand jurors unknown have been engaged in an attempt to monopolize the above de-

scribed interstate trade and commerce in the manufacture and sale of aluminum presensitized lithographic plates in violation of Section 2 of the Act of Congress of July 2, 1890 (15 U. S. C. § 2), commonly known as the Sherman Act.

44. Pursuant to and in furtherance of the aforesaid attempt to monopolize, defendant has done, among other things, the following:

(a) Embarked upon a program of controlling the plate industry by systematically coercing competitors to accept patent license agreements, which would give Minnesota domination over the competitors' manufacture and sale, by suing or threatening to sue for infringement of United States letters patent;

(b) Required or attempted to require its competitors to enter into patent license agreements with Minnesota containing some or all of the following restrictive terms and conditions:

(1) Minnesota could fix and establish the minimum prices, most favorable terms of sale, the classes of buyers, the types of plates which could be manufactured, and the manner of making and distributing the plates; the licensees would be prohibited from making or distributing under the agreement except as specified by Minnesota;

(2) The rate of royalty payable to Minnesota would increase as licensee's sales increased;

(3) Licensee would be prohibited from selling plates under a brand name other than its own or from selling to a customer, knowing the plates would be resold under a private brand name;

(4) Licensee would be required to assist Minnesota in any patent litigation against others by giving testimony and other evidence;

(5) Licensee could be required to give Minnesota a royalty-free license under any patent relating to plates that licensee obtained which was dominated by Minnesota's patents relating to plates, and when licensee's patent was not so dominated, Minnesota could demand a license under the same terms contained in the existing agreement.

(c) Sought to eliminate actual and potential competition with respect to plates through the prosecution or threat of patent infringement suits.

XX

Effects

45. The aforesaid offense in the industry described has had, among other things, the following effects:

(a) Federal and State agencies, industrial concerns, educational institutions, distributors, retailers, the general public, and others have been deprived of the benefits of free and open competition in the development, manufacture, and distribution of plates;

(b) Actual and potential competition in the plate industry has been excluded, eliminated and curtailed;

(c) Manufacturers of plates have been subjected to restrictions and restraints in manufacturing and selling plates which impaired their ability to compete with Minnesota;

(d) The progress of science and the useful arts has been discouraged and hampered, and the patent laws of the United States have been used for purposes inconsistent with their constitutional basis;

(e) Interstate commerce in plates has been substantially and unreasonably burdened and impeded.

XXI

Jurisdiction and Venue

46. The offense charged in this count of this indictment has been carried out in part within the Eastern District of Illinois and within the jurisdiction of this Court. During the period of time covered by this count of this indictment, and within five years preceding the return thereof, Minnesota has performed acts within the Eastern District of Illinois in furtherance of the offense hereinabove described.

COUNT EIGHT

47. The allegations contained in paragraphs 1, 2, 40, 41 and 42 of this indictment are here realleged with the same force and effect as though set forth in full.

XXII

Co-Conspirators

48. Various corporations and individuals not made defendants herein have participated as co-conspirators with the defendant in the offense charged in this count of this indictment and performed acts and made statements in furtherance of said offense. Said co-conspirators, some of them being known to the grand jurors and others being to

the grand jurors unknown, include among them A. B. Dick Company, a corporation organized and existing under the laws of the State of Illinois with its principal place of business in Niles, Illinois.

XXIII

Offense Charged

Combination and Conspiracy in Restraint of Trade

49. Beginning in or about 1958, the exact date being to the grand jurors unknown, and continuing thereafter up to and including the date of the return of this indictment, the defendant and co-conspirators have engaged in a combination and conspiracy in unreasonable restraint of the aforesaid interstate trade and commerce in aluminum presensitized lithographic plates in violation of Section 1 of the Act of Congress of July 2, 1890 (15 U. S. C. §1), commonly known as the Sherman Act.

50. The aforesaid combination and conspiracy has consisted of a continuing agreement, understanding, and concert of action among the defendant and co-conspirators, the substantial terms of which are that they agree:

(a) To fix, establish and maintain the minimum prices and most favorable terms of sale, the classes of buyers, the types of plates to be made, and the manner of making and distributing such plates;

(b) To amass patents relating to plates for the purpose of coercing competitive manufacturers and sellers into signing restrictive license agreements or excluding them from the plate industry;

(c) To exclude actual and potential competitive manufacturers and sellers from the plate industry through patent infringement suits or threats thereof, licensees to give testimony in licensor's behalf in such suits.

51. In effectuating and carrying out the aforesaid combination and conspiracy, the defendant and co-conspirators by agreement, understanding and concert of action have done the acts which, as hereinbefore alleged, they agreed to do.

XXIV

Effects and Jurisdiction and Venue

52. The allegations contained in paragraphs 45 and 46 of this indictment are here realleged with the same force and effect as though set forth in full.

COUNT NINE

53. The allegations contained in paragraphs 1, 2, 40, 41, 42 and 48 of this indictment are here realleged with the same force and effect as though set forth in full.

XXV

Offense Charged

Combination and Conspiracy to Monopolize

54. Beginning in or about 1958, the exact date being to the grand jurors unknown, and continuing thereafter up to and including the date of the return of this indictment, the defendant and co-conspirators have engaged in a combination and conspiracy to monopolize the aforesaid interstate trade and commerce in plates in violation of Section

2 of the Act of Congress of July 2, 1890 (15 U. S. C. §2), commonly known as the Sherman Act.

55. The allegations contained in paragraphs 50 and 51 of this indictment are here realleged with the same force and effect as though set forth in full.

XXVI

EFFECTS AND JURISDICTION AND VENUE

56. The allegations contained in paragraphs 45 and 46 of this indictment are here realleged with the same force and effect as though set forth in full.

A TRUE BILL

Dated: 12/13/61

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